### The HIV/AIDS Epidemic among Communities of Color in Massachusetts – Detailed Data Tables and Technical Notes:

#### Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH). Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2013, this resulted in the removal of 3,529 HIV/AIDS cases, of which 914 have died and 2,615 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location at diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

#### Table 1. Total number of people reported with HIV infection or AIDS<sup>1</sup> by mortality status on December 31, 2012: Massachusetts

·	N	%
People Living with HIV/AIDS  People Living with HIV/AIDS and First Diagnosed in Another U.S. State  People Reported with HIV or AIDS Who Are Deceased  Total Number of People Reported with HIV Infection or AIDS <sup>2</sup>	18,460 <sup>2</sup>	59% <sup>3</sup> 41% <b>100%</b>

Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/13

January 1, 1999 <sup>2</sup> 2013 Epidemiologic Profile Fact Sheets released in October 2013 and later include one additional prevalent HIV/AIDS case compared to releases earlier in 2013 <sup>3</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other

data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts; therefore people living with HIV/AIDS and first diagnosed in another U.S. state are not included in the total number of people reported with HIV Infection or AIDS.

Table 2. People living with HIV/AIDS on December 31, 2012 by gender, race/ethnicity, place of birth and health service region: Massachusetts<sup>1</sup>

People Living with HIV/AIDS on 12/31/12

1 00	opic Living with the Aibo on	12/31/12
Gender:	N	%
Male	12.115	740/
	13,145	71%
Female	5,315	29%
Race/Ethnicity:	N	%
White, non-Hispanic	8,029	43%
Black, non-Hispanic	5,516	30%
Hispanic/Latino	4,506	24%
Asian/Pacific Islander	309	2%
Other/Unknown	100	1%
Place of Birth:	N	%
US	40.400	000/
Puerto Rico/US Dependency <sup>2</sup>	12,166 1,929	66% 10%
Non-US	4,365	24%
NOTI-US	4,305	24%
Health Service Region <sup>3</sup> :	N	%
Boston HSR	5,829	32%
Central HSR	1,598	9%
Metro West HSR	2,628	14%
Northeast HSR	2,892	16%
Southeast HSR	2,520	14%
Western HSR	2,032	11%
Prison <sup>4</sup>	956	5%
Total <sup>5</sup>	18,460	100%

<sup>&</sup>lt;sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

before being reported in Massachusetts.

Ninety-eight percent of people living with HIV/AIDS who were born in a US Dependency were born in Puerto Rico, <1% were born in the US Virgin Islands, <1% were born in Guam and 2% were born in an unknown dependency.

<sup>&</sup>lt;sup>3</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

http://www.mass.gov/dph/aids/research/profile2005/app5 hrs maps.pdf for configuration of health service regions.

HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

<sup>&</sup>lt;sup>5</sup> Total includes five persons living with HIV/AIDS with unknown HSR; 2013 Epidemiologic Profile Fact Sheets released in October 2013 and later include one additional prevalent HIV/AIDS case compared to releases earlier in 2013 Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/13

Table 3. People living with HIV/AIDS by exposure mode: Massachusetts<sup>1</sup>

#### People Living with HIV/AIDS on 12/31/12

N	%
6,721	36%
3,753	20%
627	3%
72	<1%
337	2%
2,647	14%
885	5%
45	<1%
1,671	9%
46	<1%
4,303	23%
1,600	9%
2,703	15%
18,460	100%
	6,721 3,753 627 72 337 2,647 885 45 1,671 46 4,303 1,600 2,703

<sup>&</sup>lt;sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/13

Note: The category of "presumed heterosexual" is used in Massachusetts to re-assign females who are reported with an exposure of heterosexual sex, but only with a partner of unknown HIV status or behavioral risk. Massachusetts uses the category of presumed heterosexual to distinguish these female cases from other undetermined cases about which we know less. Prior to January 1, 2011, the presumed heterosexual category was also used to report HIV data in males. The rationale for the application of the presumed heterosexual exposure mode category to females only has been addressed in the MDPH OHA report "Intersecting Risks: HIV Infection among Heterosexual Women and Men in Massachusetts." (2010)

http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting\_risks.pdf . Nationally, the Centers for Disease Control and Prevention categorize "presumed heterosexual" cases as "no identified risk" (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk was for females in this category. Although a person may not report other risk behaviors, such as injection drug use to a health care provider, it does not exclude the possibility that an individual has experienced these other risks. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.

<sup>&</sup>lt;sup>2</sup> Includes heterosexual sex with a person who received blood/blood products.

<sup>&</sup>lt;sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>&</sup>lt;sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>&</sup>lt;sup>5</sup> 2013 Epidemiologic Profile Fact Sheets released in October 2013 and later include one additional prevalent HIV/AIDS case compared to releases earlier in 2013

## Table 4. People living with HIV/AIDS on December 31, 2012 by gender and race/ethnicity: Massachusetts<sup>1</sup>

	Male	•	Fema	le	Tota	I
Race/Ethnicity:	N	%	N	%	N	%
White (non-Hispanic)	6,668	51%	1,361	26%	8,029	43%
Black (non-Hispanic)	3,125	24%	2,391	45%	5,516	30%
Hispanic	3,049	23%	1,457	27%	4,506	24%
Asian/Pacific Islander	240	2%	69	1%	309	2%
Other/Unknown	63	<1%	37	1%	100	1%
Total <sup>2</sup>	13,145	100%	5,315	100%	18,460	100%

<sup>&</sup>lt;sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

## Table 5. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts<sup>1</sup>, 2009–2011<sup>2</sup>

	Male		Femal	е	State To	tal
Race/Ethnicity:	N	%	N	%	N	%
White (NH)	647	45%	105	20%	752	38%
Black (NH)	386	27%	279	52%	665	34%
Hispanic/Latino	357	25%	131	25%	488	25%
API	50	3%	12	2%	62	3%
Other/Unknown	7	<1%	5	1%	12	1%
Total	1,447	100%	532	100%	1,979	100%

<sup>&</sup>lt;sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>2</sup> 2013 Epidemiologic Profile Fact Sheets released in October 2013 and later include one additional prevalent HIV/AIDS case compared to releases earlier in 2013.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/13

<sup>&</sup>lt;sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999. (NH) = Non-Hispanic, API = Asian/Pacific Islander

#### **Explanation of age-adjusted rates**

A "rate" of a disease per 100,000 population is a useful way to compare groups that have substantially different population sizes rather than relying on the raw number of cases. For example, the number of people living with HIV/AIDS on December 31, 2012 who are Hispanic/Latino, is 4.506 whereas the number of people living with HIV/AIDS who are white (non-Hispanic) is 8,028. Although the *number* of people living with HIV/AIDS who are Hispanic/Latino in Massachusetts is smaller than the number of people living with HIV/AIDS who are white (non-Hispanic), we also need to consider that there are far fewer people of Hispanic/Latino heritage living in Massachusetts than white (non-Hispanic) individuals. Hispanic/Latino individuals represent 10% of the Massachusetts population compared to white (non-Hispanic) individuals who represent 78% of the population<sup>1</sup>. If HIV/AIDS had the same impact on the Hispanic/Latino population of the state as on the white (non-Hispanic), then there should be eight times as many cases in white (non-Hispanic) individuals, but there are less than twice as many. By calculating a rate which takes into consideration the differences in the population size, it is evident that the number of people living with HIV/AIDS for every 100.000 Hispanic/Latino individuals in Massachusetts is much higher than the rate for every 100,000 white (non-Hispanic) individuals. This is called a "crude rate" and is calculated by dividing the number of people living with HIV/AIDS by the population of interest (the total number of Hispanic/Latino individuals in Massachusetts, for example) and multiplying by 100,000. (See example 1.A below).

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<sup>&</sup>lt;sup>1</sup> The denominators for prevalence calculations are based on year 2010 population estimates from the MDPH Bureau of Health Information, Statistics, Research and Evaluation

### Example 1.A: Calculation of crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (156.4 per 100,000)

Crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals

= (number of white (non-Hispanic) individuals living with HIV/AIDS ÷ population size of white (non-Hispanic) individuals)×100,000

 $= (8,029/5,132,633) \times 100,000$ 

 $= (.00015643) \times 100,000$ 

= 156.4

However, sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black (non-Hispanic) and Hispanic/Latino populations are generally younger than white (non-Hispanic). The median age of black (non-Hispanic) people (29.7 years) and Hispanic/Latino people (24.5 years) is younger than that of white (non-Hispanic) people (38.8 years). Therefore, it is necessary to "age-adjust" the HIV/AIDS prevalence rate to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 1.B below).

Example 1.B: Calculation of age-adjusted HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (134.8 per 100,000)

А	В	С	D	E
Age group (in years)	# of prevalent HIV/AIDS cases	Population (2010)	2000 US standard population weight	Age-adjusted rate ((B÷C×D)×100,000))
<1	0	48,010	0.013818	0.00
1-4	0	200,452	0.055317	0.00
5-14	4	571,967	0.145565	0.10
15-24	94	677,899	0.138646	1.92
25-34	479	603,245	0.135573	10.77
35-44	1,233	676,064	0.162613	29.66
45-54	3,469	841,315	0.134834	55.60
55-64	2,139	697,852	0.087247	26.74
65-74	523	403,518	0.066037	8.56
75-84	84	275,380	0.044842	1.37
85+ years	4	136,931	0.015508	0.05
Total	8,029	5,132,633	1	134.8

To see the effect of age-distribution on prevalence rates see Tables 6 through 8 below for a comparison of crude and age-adjusted rates by race/ethnicity.

Table 6. Crude and age-adjusted HIV/AIDS prevalence per 100,000 population<sup>1</sup> on December 31, 2012 by race/ethnicity and gender: Massachusetts<sup>2</sup>

	Crude rate per	Age-adjusted rate
State Total:	100,000	per 100,000
White, non-Hispanic	156.4	134.8
Black, non-Hispanic	1,327.9	1,354.3
Hispanic/Latino	717.9	914.3
Asian/Pacific Islander	85.9	88.0
Total prevalence	282.0	258.5
	Crude rate per	Age-adjusted rate
Males:	100,000	per 100,000
White, non-Hispanic	268.9	229.4
Black, non-Hispanic	1,557.5	1,623.4
Hispanic/Latino	989.6	1,327.5
Asian/Pacific Islander	139.5	143.8
Total prevalence among males	415.2	376.9
	Crude rate per	Age-adjusted rate
Females:	100,000	per 100,000
White, non-Hispanic	51.3	45.8
Black, non-Hispanic	1,113.4	1,124.2
Hispanic/Latina	455.9	557.1
Asian/Pacific Islander	36.8	37.1
Total prevalence among females	157.2	148.2

<sup>&</sup>lt;sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation

Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/13

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<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Table 7. Crude and age-adjusted rates of diagnosis of HIV infection per 100,000 population<sup>1</sup> by race/ethnicity and gender: Average annual rate 2009–2011<sup>2</sup>, Massachusetts<sup>3</sup>

0	<u> </u>	A 11 1 1 1
State total:	Crude rate per	Age-adjusted rate
	100,000	per 100,000
		-
White (non-Hispanic)	4.9	5.0
Black (non-Hispanic)	53.4	52.7
Hispanic/Latino	25.9	27.4
Asian/Pacific Islander	5.7	5.2
7 Glativi dollio iolaridoi	<b>5</b>	0.2
Total rate	10.1	10.2
1014111410		
Males:	Crude rate per	Age-adjusted rate
	100,000	per 100,000
	100,000	per 100,000
White (non-Hispanic) Males	8.7	8.8
Black (non-Hispanic) Males	64.1	62.6
Hispanic/Latino Males	38.6	41.0
Asian/Pacific Islander Males	9.7	8.8
Asian/Facine islander iviales	9.7	0.0
Total rate among males	15.2	15.2
Total rate among males	13.2	13.2
Females:	Crude rate per	Age-adjusted rate
	100,000	per 100,000
	100,000	per 100,000
White (non-Hispanic) Females	1.3	1.4
Black (non-Hispanic) Females	43.3	43.2
Hispanic/Latina Females	13.7	14.6
Asian/Pacific Islander Females	2.1	1.9
Asiant acinc islander i emales	2.1	1.9
Total rate among females	5.2	5.4
Total fate alliony lemales	3.2	5.4

<sup>&</sup>lt;sup>1</sup>The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation

Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/13

<sup>&</sup>lt;sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.
<sup>3</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Table 8. Crude and age-adjusted rates of death among people reported with HIV/AIDS per 100,000 population<sup>1</sup> by race/ethnicity and gender: average annual rate 2009–2011, Massachusetts<sup>2</sup>

State Total:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non-Hispanic)	2.3	1.9
Black (non-Hispanic)	15.6	16.0
Hispanic/Latino	9.8	13.3
Mass. Total Rate	3.8	3.4
Males:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non-Hispanic) Males	3.4	2.8
Black (non-Hispanic) Males	21.6	22.8
Hispanic/Latino Males	13.7	20.7
Mass. Total Rate Among Males	5.5	4.9
Females:	Crude Rate per 100,000	Age-Adjusted Rate per 100,000
White (non Hignoria) Females	1.3	1.2
White (non-Hispanic) Females Black (non-Hispanic) Females	9.9	10.0
Hispanic/Latina Females	5.9	7.2
Mass. Total Rate Among Females	2.2	2.1

<sup>&</sup>lt;sup>1</sup>The denominators for rate calculations are from the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2010; all rates are age-adjusted using the 2000 US standard population.

<sup>2</sup>Effective, January 1, 2011 the Massachusetts Department of Public Health, Office of HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being diagnosed and reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program; data as of 1/1/13

Table 9. People diagnosed with HIV infection by race/ethnicity<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>, 2009–2011<sup>3</sup>

	White (	NH)	Black (I	NH)	Hispanic/	Latino
Exposure Mode:	N	%	N	%	N	%
Male-to-male sex (MSM)	479	64%	134	20%	153	31%
Injection drug use (IDU)	65	9%	33	5%	62	13%
MSM/IDU	35	5%	9	1%	8	2%
Heterosexual sex	35	5%	124	19%	87	18%
Other	0	0%	8	1%	5	1%
Total undetermined/other	138	18%	357	54%	173	35%
<ul> <li>Presumed heterosexual sex<sup>4</sup></li> </ul>	24	3%	138	21%	44	9%
• Undetermined <sup>5</sup>	114	15%	219	33%	129	26%
Total	752	100%	665	100%	488	100%

Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small

<sup>&</sup>lt;sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>&</sup>lt;sup>5</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up. (NH) = Non-Hispanic

Table 10. *Males* diagnosed with HIV infection by race/ethnicity<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>, 2009–2011<sup>3</sup>

Exposure Mode:	White (I	NH)	Black (I	Black (NH)		_atino
	N	%	N	%	N	%
Male-to-male sex (MSM)	479	74%	134	35%	153	43%
Injection drug use (IDU)	28	4%	28	7%	48	13%
MSM/IDU `	35	5%	9	2%	8	2%
Heterosexual sex	9	1%	33	9%	31	9%
Undetermined <sup>4</sup>	96	15%	179	46%	114	32%
Total⁵	647	100%	386	100%	357	100%

<sup>&</sup>lt;sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/13

Table 11. *Females* diagnosed with HIV infection by race/ethnicity<sup>1</sup> and exposure mode: Massachusetts<sup>2</sup>, 2009–2011<sup>3</sup>

	White (	NH)	Black (	NH)	Hispar Latin	
Exposure Mode:	N	N %		%	N	
Injection drug use	37	35%	5	2%	14	11%
Heterosexual sex	26	25%	91	33%	56	43%
Total undetermined/other	42	40%	178	64%	59	45%
<ul> <li>Presumed heterosexual sex<sup>4</sup></li> <li>Undetermined<sup>5</sup></li> </ul>	24 18	23% 17%	138 40	49% 14%	44 15	34% 11%
Total <sup>6</sup>	105	100%	279	100%	131	100%

<sup>&</sup>lt;sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

(NH) = Non-Hispanic

<sup>&</sup>lt;sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>&</sup>lt;sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>&</sup>lt;sup>5</sup>Totals include pediatric and blood/blood products exposure modes.

<sup>&</sup>lt;sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>&</sup>lt;sup>4</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>&</sup>lt;sup>5</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up. <sup>6</sup> Totals include pediatric and blood/blood products exposure modes.

Table 12. Percentage distribution of people diagnosed with HIV infection by Health Service Region (HSR)<sup>1</sup> and race/ethnicity: Massachusetts<sup>2</sup>, 2009–2011<sup>3</sup>

			Hispanic/		
	White (NH)	Black (NH)	Latino	API	Total
HSR	%	%	%	%	N
Boston HSR	32%	43%	22%	2%	604
Central HSR	36%	39%	23%	2%	171
Metro West HSR	44%	32%	19%	5%	325
Northeast HSR	34%	29%	32%	6%	326
Southeast HSR	54%	31%	13%	1%	278
Western HSR	37%	19%	42%	2%	205
Prisons <sup>4</sup>	25%	30%	41%	3%	69
Mass. Total	38%	34%	25%	3%	1,979

<sup>&</sup>lt;sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

http://www.mass.gov/dph/aids/research/profile2005/app5 hrs maps.pdf for configuration of health service regions.

Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>&</sup>lt;sup>4</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status. (NH) = Non-Hispanic, API = Asian/Pacific Islander

Table 13. People living with HIV/AIDS on December 31, 2012 by Health Service Region (HSR)<sup>1</sup> and race/ethnicity: Massachusetts<sup>2</sup>

					Hispa	anic/					Total
HSR	White	(NH)	Black	(NH)	Lati	no	AP	I	Other/	Und.	
	N	%	N	%	N	%	N	%	N	%	N
_											
Boston	2,345	40%	2,239	38%	1,134	19%	86	1%	25	<1%	5,829
Central	675	42%	405	25%	490	31%	23	1%	5	<1%	1,598
Metro West	1,322	50%	907	35%	330	13%	60	2%	9	<1%	2,628
Northeast	1,245	43%	699	24%	830	29%	100	3%	18	1%	2,892
Southeast	1,542	61%	566	22%	372	15%	17	1%	23	1%	2,520
Western	626	31%	403	20%	973	48%	16	1%	14	1%	2,032
Prison <sup>3</sup>	272	28%	297	31%	377	39%	5	1%	5	1%	956
Total⁴	8,029	43%	5,516	30%	4,506	24%	309	2%	100	1%	18,460

Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

http://www.mass.gov/dph/aids/research/profile2005/app5 hrs maps.pdf for configuration of health service regions.

Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup>HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

<sup>&</sup>lt;sup>4</sup> Mass. total includes five persons living with HIV/AIDS with unknown residence at time of report; 2013 Epidemiologic Profile Fact Sheets released in October 2013 and later include one additional prevalent HIV/AIDS case compared to releases earlier in 2013 (NH)= Non-Hispanic . API = Asian/Pacific Islander, Other/Und. = Other/Undetermined Data Source: MDPH HIV/AIDS Surveillance Program, data as of 1/1/13

# Table 14. Ten cities/towns<sup>1</sup> in Massachusetts<sup>2</sup> with the highest proportion of black (non-Hispanic) individuals among HIV infection diagnoses (HIV DX): 2009–2011<sup>3</sup>

Rank	City/Town	Number of HIV DX among black non- Hispanic individuals	Percent of Total HIV DX
1	Brockton	48	77%
2	Malden	14	56%
3	Worcester	41	47%
4	Boston	249	45%
5	Waltham	16	44%
6	Everett	9	41%
7	Lowell	21	40%
8	Framingham	9	38%
9	Cambridge	18	37%
10	Medford	8	35%

<sup>&</sup>lt;sup>1</sup> Cities with fewer than 20 HIV infection diagnoses from 2009–2011 are excluded. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included

<sup>&</sup>lt;sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/13

# Table 15. Ten cities/towns<sup>1</sup> in Massachusetts<sup>2</sup> with the highest proportion of Hispanic/Latino individuals among HIV infection diagnoses (HIV DX): 2009–2011<sup>3</sup>

Rank	City/Town	Number of HIV DX among Hispanic/Latino individuals	Percent of Total HIV DX
1	Lawrence	46	84%
2	Chelsea	17	74%
3	Holyoke	22	69%
4	Springfield	49	51%
5	Lynn	18	39%
6	Somerville	9	32%
7	Fall River	8	30%
8	Framingham	7	29%
9	Everett	6	27%
10	Worcester	23	26%

<sup>&</sup>lt;sup>1</sup> Cities with fewer than 20 HIV infection diagnoses from 2009–2011 are excluded. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included

<sup>&</sup>lt;sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/13

## Table 16. People diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2009–2011<sup>3</sup>

			Puerto R	ico/		
	US		US Depend	lency⁴	Non-U	S
Race/Ethnicity:	N	%	N	%	N	%
White (NH)	691	92%	<b></b> <sup>5</sup>	<1%	60	8%
Black (NH)	328	49%	<b></b> <sup>5</sup>	<1%	336	51%
Hispanic/Latino	170	35%	129	26%	189	39%
APÍ	19	31%	0	0%	43	69%
Total	1,216	61%	<b></b> <sup>5</sup>	7%	632	32%

Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

(NH) = Non-Hispanic, API = Asian/Pacific Islander

<sup>&</sup>lt;sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>&</sup>lt;sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2009–2011 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.
<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional

<sup>&</sup>lt;sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

### Table 17. *Males* diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2009–2011<sup>3</sup>

Race/Ethnicity:	US		Puerto R US Depend		Non-U	S
	N	%	N	%	N	%
White (NH) Black (NH) Hispanic/Latino API All Males <sup>5</sup>	590 247 131 15 <b>989</b>	91% 64% 37% 30% <b>68%</b>	<sup>6</sup> 0 91 0 <sup>6</sup>	<1% 0% 25% 0% <b>6%</b>	56 139 135 35 <b>366</b>	9% 36% 38% 70% <b>25%</b>

Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>&</sup>lt;sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>&</sup>lt;sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2009–2011 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>&</sup>lt;sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

<sup>&</sup>lt;sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

<sup>(</sup>NH) = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/13

### Table 18. *Females* diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2009–2011<sup>3</sup>

Race/Ethnicity:	US		Puerto Ri US Depend	4	Non-U	S
	N	%	N	%	N	%
White (NH)	101	96%	0	0%	4	4%
Black (NH)	81	29%	<b></b> <sup>6</sup>	<1%	197	71%
Hispanic/Latino <b>All Females</b> ⁵	39 <b>227</b>	30% <b>43%</b>	38 <sup>6</sup>	29% <b>7%</b>	54 <b>266</b>	41% <b>50%</b>

<sup>&</sup>lt;sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>&</sup>lt;sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>&</sup>lt;sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2009–2011 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>&</sup>lt;sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

<sup>&</sup>lt;sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic

## Table 19. Black (non-Hispanic) individuals diagnosed with HIV infection born outside the US by leading countries of birth: Massachusetts<sup>1</sup>, 2009–2011<sup>2</sup>

Rank	Country of Birth	Number of HIV DX <sup>3</sup> among Non-US born	Percent of HIV DX among all Non-US born Black (non- Hispanic) individuals
1	Haiti	110	33%
2	Uganda	36	11%
3	Cape Verde	34	10%
4	Ghana	20	6%
5	Kenya	20	6%
6	Ethiopia	17	5%
7	Nigeria	14	4%
8	Cameroon	10	3%
9	Tanzania	10	3%
10	Liberia	6	2%

<sup>&</sup>lt;sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS

<sup>&</sup>lt;sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>&</sup>lt;sup>3</sup> HIV DX = HIV diagnoses

## Table 20. Hispanic/Latino individuals diagnosed with HIV infection born outside the US by leading countries of birth: Massachusetts<sup>1</sup>, 2009–2011<sup>2</sup>

Rank	Country of Birth	Number of HIV DX <sup>3</sup> among Non-US born	Percent of HIV DX among all Non-US born Hispanic/Latino individuals
1	Dominican Republic	55	29%
2	Brazil	38	20%
3	El Salvador	20	11%
4	Guatemala	17	9%
5	Colombia	14	7%
6	Honduras	12	6%
7	Mexico	6	3%

<sup>&</sup>lt;sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

another state before being reported in Massachusetts.

Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> HIV DX = HIV diagnoses

Table 21. People living with HIV/AIDS on December 31, 2012 by current age and race/ethnicity: Massachusetts<sup>2</sup>

White NH		Black	Black NH Hispanic/Latino			State Total		
Age in years	N	%	N	%	N	%	N	%
Under 13	3	<1%	17	<1%	5	<1%	26	<1%
13 to 19	17	<1%	60	1%	37	1%	116	1%
20 to 24	78	1%	111	2%	92	2%	294	2%
25 to 29	165	2%	185	3%	161	4%	527	3%
30 to 34	314	4%	278	5%	276	6%	895	5%
35 to 39	436	5%	409	7%	410	9%	1,306	7%
40 to 44	797	10%	684	12%	637	14%	2,185	12%
45 to 49	1,606	20%	981	18%	903	20%	3,580	19%
50 to 54	1,863	23%	1,024	19%	923	20%	3,870	21%
55 to 59	1,377	17%	883	16%	562	12%	2,850	15%
60+	1,373	17%	884	16%	500	11%	2,811	15%
Total <sup>3</sup>	8,029	100%	5,516	100%	4,506	100%	18,460	100%

Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not

presented due to small numbers <sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> 2013 Epidemiologic Profile Fact Sheets released in October 2013 and later include one additional prevalent HIV/AIDS case compared to releases earlier in 2013 NH = non-Hispanic

Table 22. People diagnosed with HIV infection by age at diagnosis and race/ethnicity: Massachusetts, 2009-2011<sup>2</sup>

	White NH		Black	NH	Hispanic/Latino		State Total	
Age in years	N	%	N	%	N	%	N	%
Under 13	0	0%	8	1%	3	1%	12	1%
13 to 19	9	1%	25	4%	15	3%	52	3%
20 to 24	68	9%	55	8%	45	9%	176	9%
25 to 29	79	11%	59	9%	64	13%	207	10%
30 to 34	86	11%	75	11%	75	15%	250	13%
35 to 39	105	14%	83	12%	77	16%	277	14%
40 to 44	128	17%	94	14%	71	15%	303	15%
45 to 49	129	17%	97	15%	61	13%	301	15%
50 to 54	71	9%	72	11%	41	8%	186	9%
55 to 59	32	4%	53	8%	22	5%	109	6%
60+	45	6%	44	7%	14	3%	106	5%
Total	752	100%	665	100%	488	100%	1,979	100%

Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers

NH = non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data

Table 23. People diagnosed with HIV infection under age 25 years within the years 2009–2011<sup>1</sup> and total population under age 25 years by race/ethnicity: Massachusetts<sup>3</sup>

	White NH		Blaci	k NH	Hispanie	Hispanic/Latino		State Total	
	N	%	N	%	N	%	N	%	
HIV Infection Diagnoses Total	77	34%	80	35%	60	26%	228	100%	
Population	1,498,328	71%	165,032	8%	298,888	14%	2,096,538	100%	

Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

NH = non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/13; year 2010 population estimates are from the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2010

Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>&</sup>lt;sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>&</sup>lt;sup>2</sup> Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to

small numbers.

<sup>3</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

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